



Scottish Clinical Imaging network

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INDICATIONS FOR THE USE OF ^{18}F -FDG PET CT IN LUNG CANCER IN SCOTLAND

Background

Positron Emission Tomography using ¹⁸F-FDG has been shown in many studies to be more accurate than standard staging investigations using CT scanning for the detection of involved mediastinal nodes, adrenal metastases and bone metastases with a subsequent change in management in a significant number of patients. The HTA (2007) confirmed earlier findings that there were cost effective indications for the use of PET scanning in the management of lung cancer. The original document 2008 was updated in 2016 & 2020. This planned review takes into account current evidence, updated clinical guidance and also to reflect current clinical practice. There have been no significant changes to current guidance as a result of this review.

PET CT remains a limited resource and should only be considered in patients where the result is likely to directly influence individual patient outcomes and management.

Routine Indications

- Staging of Non Small Cell Lung Cancer (NSCLC) in patients who are potentially suitable for treatment with curative intent. Radiotherapy positioning/equipment should be considered during PET CT, for future treatment planning, where appropriate
- Assessment of solid solitary pulmonary nodules (≥ 8 mm) with an initial risk of malignancy of $>10\%$ (Brock model). PET CT can also be considered in the management of patients with part-solid Ground Glass Nodules with a solid component ≥ 8 mm.
- Assessment of response to chemotherapy or radiotherapy in selected patients who have had an apparently very good response on conventional imaging and surgery is being considered.
- To differentiate between treatment effects and recurrent cancer where conventional imaging is equivocal.
- In selected patients with Small Cell Lung Cancer (SCLC) who may be at risk of distant metastasis and are being considered for intensive treatment/radical surgery.

Non-Routine Indications

- Repeat PET CT, although not routinely recommended, can be considered in selected patients where treatment has been delayed for at least 8-10 weeks since the original scan and repeat conventional imaging has been inconclusive or demonstrates disease progression.
- In selected patients with oligometastases being considered for curative treatment
- PET CT could be considered in the management of selected patients with suspected pleural tumours, after consideration at the MDT.

Future Considerations

There is currently insufficient evidence to advocate the use of PET CT with regards to response assessment to either radiotherapy or systemic therapies. This will be kept under review in subsequent revisions.

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